

SEQUENCE LISTING

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IVERSON, BRENT L.

<120> COMBINATORIAL PROTEIN LIBRARY SCREENING BY
PERIPLASMIC EXPRESSION

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<140> UNKNOWN
<141> 2003-07-15

<150> 60/396,058
<151> 2002-07-15

<150> 09/699,023
<151> 2000-10-27

<160> 25

<170> PatentIn Ver. 2.1

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<211> 17
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<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Primer

<400> 1
caggaaacag ctatgac

17

<210> 2
<211> 17
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<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Primer

<400> 2
gaattttctg tatgagg

17

<210> 3
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

25314940.1

Primer

<400> 3
gccacacctccg cctgaacc 18

<210> 4
<211> 17
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Primer

<400> 4
ctatgcggcc ccattca 17

<210> 5
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<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Primer

<400> 5
aaaaaa 5

<210> 6
<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Primer

<400> 6
gaaggagata tacatatgaa actgacaaca catcatcta 39

<210> 7
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Primer

<400> 7
ctgggccatg gccggctggg cctcgctgct actctggtcg caacc 45

<210> 8
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic Peptide

<400> 8
Gln Thr Thr His Val Pro Pro
1 5

<210> 9
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic Peptide

<400> 9
Gln Thr Thr His Val Pro Pro
1 5

<210> 10
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic Peptide

<400> 10
Gln Thr Thr His Ser Pro Ala
1 5

<210> 11
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic Peptide

<400> 11
Gln Thr Thr His Leu Pro Thr
1 5

<210> 12
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic Peptide

<400> 12
Gln Thr Thr His Thr Pro Pro
1 5

<210> 13
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic Peptide

<400> 13
Gln Thr Thr His Thr Pro Pro
1 5

<210> 14
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic Peptide

<400> 14
Gln Thr Thr His Ile Pro Thr
1 5

<210> 15
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic Peptide

<400> 15
Gln Thr Thr His Val Pro Pro
1 5

<210> 16

25314940.1

<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic Peptide

<400> 16
Gln Thr Thr His Val Pro Ala
1 5

<210> 17
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic Peptide

<400> 17
Gln Thr Thr His Ile Pro Ala
1 5

<210> 18
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic Peptide

<400> 18
Gln Thr Thr His Leu Pro Ala
1 5

<210> 19
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic Peptide

<400> 19
Gln Thr Thr His Val Pro Cys
1 5

<210> 20
<211> 741

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic Primer

<400> 20
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gatggaaactg ttaaactctt gatctactac acatcaagat tacagtcagg agtcccata 180
aggttcagtg gcagttggtc tggaaacagat tattctctca ccattagcaa ccaggagcaa 240
gaagatattg gcacttactt ttgccaacag ggttaatacgc ttccgtggac gttcggtgga 300
ggcaccaagc tggaaataaaa acgtgggtgtt ggtgttctg gtgggttgtt ttctggcggc 360
ggcggctccg gtgggtgtgg atccgaggc caactgcaac agtctggacc tgagctggtg 420
aagcctgggg cctcaagtgaa gatttcctgc aaagattctg gctacgcatt cagtagctct 480
tggatgaact gggtaagca gaggcctgga cagggcttg agtggattgg acggatttat 540
cctggagatg gagatactaa ctacaatggg aagttcaagg gcaaggccac actgactgca 600
gacaaatccct ccagcacagc ctacatgcag ctcagcagcc tgacctctgt ggactctg 660
gtctatttctt gtgcaagatc ggggttacta cgttatgcta tggactactg gggtaagga 720
acctcagtca ccgttcctc g 741

<210> 21
<211> 247
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic Peptide

<400> 21
Asp Ile Gln Met Thr Gln Thr Thr Ser Ser Leu Ser Ala Ser Leu Gly
1 5 10 15

Asp Arg Val Thr Ile Ser Cys Arg Ala Ser Gln Asp Ile Arg Asn Tyr
20 25 30

Leu Asn Trp Tyr Gln Gln Lys Pro Asp Gly Thr Val Lys Leu Leu Ile
35 40 45

Tyr Tyr Thr Ser Arg Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Tyr Ser Leu Thr Ile Ser Asn Gln Glu Gln
65 70 75 80

Glu Asp Ile Gly Thr Tyr Phe Cys Gln Gln Gly Asn Thr Leu Pro Trp
85 90 95

Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Arg Gly Gly Gly Gly
100 105 110

Ser Gly Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser
115 120 125

Glu Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Ala
130 135 140

Ser Val Lys Ile Ser Cys Lys Asp Ser Gly Tyr Ala Phe Ser Ser Ser
145 150 155 160

Trp Met Asn Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile
165 170 175

Gly Arg Ile Tyr Pro Gly Asp Gly Asp Thr Asn Tyr Asn Gly Lys Phe
180 185 190

Lys Gly Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Ser Thr Ala Tyr
195 200 205

Met Gln Leu Ser Ser Leu Thr Ser Val Asp Ser Ala Val Tyr Phe Cys
210 215 220

Ala Arg Ser Gly Leu Leu Arg Tyr Ala Met Asp Tyr Trp Gly Gln Gly
225 230 235 240

Thr Ser Val Thr Val Ser Ser
245

<210> 22
<211> 741
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Primer

<400> 22
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gtcagttca gggcaagtca ggacattagg aattattaa actggtatca gcagaaacca 120
gacggaactg ttaaattcct gatctactac acatcaagat tacagccagg agtccccatca 180
agttcagtg gcagtggtc tggAACAGAT tattccctca ccattaacaa cctggagcag 240
gaagatattg gcacttactt ttgccaacag ggcaatacgc ctccgtggac gttcggtgga 300
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ggcggctccg gtgggtgtgg atccgaggtc caactgcaac agtctggacc tgagctggtg 420
aaggcctgggg cctcagtcaa gatttcctgc aaagattctg gctacgcatt caatagctct 480
tggatgaact gggtaagca gaggcctgga cagggtctt agtggattgg acggatttat 540
cctggagatg gagattctaa ctacaatggg aaattcgagg gcaaggccat actgactgca 600
gacaaatcct ccagcacagc ctacatgcag ctcagcagcc tgacctctgt ggactctgcg 660
gtctatttct gtgcaagatc ggggttgcta cgttatgcta tggactactg gggtaagga 720
acctcagtca ccgtctcctc g 741

<210> 23
<211> 247
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

Peptide

<400> 23

Asp Ile Gln Met Thr Gln Thr Thr Ser Ser Leu Ser Ala Ser Leu Gly
1 5 10 15

Asp Arg Val Thr Val Ser Cys Arg Ala Ser Gln Asp Ile Arg Asn Tyr
20 25 30

Leu Asn Trp Tyr Gln Gln Lys Pro Asp Gly Thr Val Lys Phe Leu Ile
35 40 45

Tyr Tyr Thr Ser Arg Leu Gln Pro Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Tyr Ser Leu Thr Ile Asn Asn Leu Glu Gln
65 70 75 80

Glu Asp Ile Gly Thr Tyr Phe Cys Gln Gln Gly Asn Thr Pro Pro Trp
85 90 95

Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Arg Gly Gly Gly
100 105 110

Ser Asp Gly Gly Ser Gly Gly Ser Gly Gly Gly Ser
115 120 125

Glu Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Ala
130 135 140

Ser Val Lys Ile Ser Cys Lys Asp Ser Gly Tyr Ala Phe Asn Ser Ser
145 150 155 160

Trp Met Asn Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile
165 170 175

Gly Arg Ile Tyr Pro Gly Asp Gly Asp Ser Asn Tyr Asn Gly Lys Phe
180 185 190

Glu Gly Lys Ala Ile Leu Thr Ala Asp Lys Ser Ser Thr Ala Tyr
195 200 205

Met Gln Leu Ser Ser Leu Thr Ser Val Asp Ser Ala Val Tyr Phe Cys
210 215 220

Ala Arg Ser Gly Leu Leu Arg Tyr Ala Met Asp Tyr Trp Gly Gln Gly
225 230 235 240

Thr Ser Val Thr Val Ser Ser
245

<210> 24

<211> 741

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
Primer

<400> 24

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gtcagttgca gggcaagtca ggacattagg aattatttaa actggtatca gcagaaacca 120
gacggaactg ttaaaattcct gatctactac acatcaagat tactgccagg agtcccacca 180
agggttcagtg gcagttggtc ttgaaacagat tattccctca ccattaacaa cctggagcag 240
gaagatattg gcacttactt ttgccaacag ggcaatacgc ctccgtggac gttcggtgga 300
ggcaccaagc tggaaataaa acgtggtgga ggtggttctg atggtggtgg ttctggcggc 360
ggcggtcccg gtgggtgtgg atccgagggtc caactgcaac agtctggacc tgagctggtg 420
aaggcctgggg cctcagtgaa gatttcctgc aaagattctg gctacgcatt caatagctct 480
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cctggagatg gagattctaa ctacaatggg aaattcgagg gcaaggccat actgacagca 600
gacaaaatcct ccagcacagc ctacatgcag ctcagcagcc tgacctctgt ggactctgcg 660
gtctatttct gtgcaagatc ggggttgcta cgttatgcta tggactactg gggtaagga 720
acctcagtca ccgtctcctc g 741

<210> 25

<211> 247

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
Peptide

<400> 25

Asp Ile Gln Met Thr Gln Thr Thr Ser Ser Leu Ser Ala Ser Leu Gly
1 5 10 15

Asp Arg Val Thr Val Ser Cys Arg Ala Ser Gln Asp Ile Arg Asn Tyr
20 25 30

Leu Asn Trp Tyr Gln Gln Lys Pro Asp Gly Thr Val Lys Phe Leu Ile
35 40 45

Tyr Tyr Thr Ser Arg Leu Leu Pro Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Tyr Ser Leu Thr Ile Asn Asn Leu Glu Gln
65 70 75 80

Glu Asp Ile Gly Thr Tyr Phe Cys Gln Gln Gly Asn Thr Pro Pro Trp
85 90 95

Thr Phe Gly Gly Thr Lys Leu Glu Ile Lys Arg Gly Gly Gly
100 105 110

Ser Asp Gly Gly Ser Gly Gly Ser Gly Gly Gly Ser
115 120 125

Glu Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Ala
130 135 140

Ser Val Lys Ile Ser Cys Lys Asp Ser Gly Tyr Ala Phe Asn Ser Ser
145 150 155 160

Trp Met Asn Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile
165 170 175

Gly Arg Ile Tyr Pro Gly Asp Gly Asp Ser Asn Tyr Asn Gly Lys Phe
180 185 190

Glu Gly Lys Ala Ile Leu Thr Ala Asp Lys Ser Ser Thr Ala Tyr
195 200 205

Met Gln Leu Ser Ser Leu Thr Ser Val Asp Ser Ala Val Tyr Phe Cys
210 215 220

Ala Arg Ser Gly Leu Leu Arg Tyr Ala Met Asp Tyr Trp Gly Gln Gly
225 230 235 240

Thr Ser Val Thr Val Ser Ser
245